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ABSTRACT

New York State has provided an alternative in the high school equivalency program consisting of a thorough analysis of an individual's strengths and weaknesses in key academic skill areas essential to success in any formal postsecondary educational program followed by an individualized learning program designed to meet individual needs. This manual provides inservice training and information for teachers and administrators. An historical background and information on the content and technical features of General Educational Development (GED) Tests are provided. Directions on administering the program are supplied including scheduling, staffing patterns, basic instructional units, eligibility, entrance testing, diagnosis and prescription, and instruction and evaluation. A model is presented of a systems approach to individualizing the GED preparation process. The open ended program requires high level management skills. An exemplar of methods to manage specific problems arising in this course of study is provided in an interactional format. The final chapter discusses test wiseness. (RC)

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HIGH SCHOOL EQUIVALENCY ADMINISTRATORS MANUAL

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FOREWORD

Throughout the United States, a high school diploma has long been the most common key to career advancement. The doors of opportunity are open to those having such a diploma; those without are generally locked out. Yet thousands of students drop out of school each year. Without a viable alternative, most can look forward to little but marginal employment.

To remedy this situation, New York State has provided an alternative in the high school equivalency program. Far from being a coaching course to prepare a student for an examination, the program consists of a thorough analysis of the individual's strengths and weaknesses in key academic skill areas essential to success in any formal postsecondary educational program followed by an individualized learning program designed to meet his individual need.

To implement this individualized program, teachers and administrators need information and inservice training. This publication promises to be a most valuable tool in this effort.

Robert Seckendorf
Assistant Commissioner for
Occupational & Continuing Education

MESSAGE TO THE ADMINISTRATOR

It is generally agreed that the most important ingredient in an effective high school equivalency preparation program is the teacher. However, teacher effectiveness is usually a direct reflection of the administrative support given to him by the person charged with the administrative responsibilities for the program. It is the intent of this publication to provide those charged with the administration of high school equivalency preparation programs techniques and methods to implement an effective model for such programs. The material presented in this manual is based on experiences gathered from numerous effective programs and selected pilot projects developed during the past five years.

This publication is the collective endeavor of personnel from the Division of Continuing Education and selected specialists in the field of high school equivalency preparation programs who comprised the publication team.

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CONTENTS

	Page
Foreword	iii
Message to the Administrator	iv
Contents	v
Historical Background	1
Content and Technical Features of GED Tests	3
Administering the Program	16
Program Operation	34
Test Wiseness	59

Chapter I

HISTORICAL BACKGROUND

The G.I. Bill passed in 1944 provided financial support for veterans to continue their education. Many service personnel had had their high school education interrupted and consequently did not have the necessary qualifications for entrance to higher education. In order to provide these qualifications the armed forces began in 1945 to award high school equivalency diplomas to enlisted men who passed an exam. This exam, called the General Educational Development Test (GEDT), was developed for the armed forces by the American Council on Education. The GEDT is actually a battery of 5 two hour examinations in the areas of math, English usage, science, social studies, and literature. The specific content of the GEDT is discussed in more detail later in this manual.

The GEDT was made available to service personnel and veterans by most state education departments in 1946. Since that time state departments of education have expanded the availability of the tests to all adult residents. By 1960, 35 states offered the GEDT to all adult residents and by 1972 that number had increased to 61 including all 50 states, the District of Columbia, American Samoa, the Canal Zone, Guam, Puerto Rico, the Trust Territory of the Pacific Islands and five provinces of Canada. In all states but one (California) the state education department issues a high school equivalency diploma upon successful completion of the GEDT. Most departments have also lowered the minimum age requirement for the diploma from 20 or 21 in 1960 to 18 or 19 in 1972. In 42 states persons 16 or 17 years of age may take the exam if they have been out of school for six months or a year. Many states require a letter from a military recruiter, employer, college or university or a special training program to accompany the youth's application for the exam. The GEDT is given in state correctional and health institutions in 45 states and the District of Columbia. The GEDT is also administered in all federal health and correctional facilities. A Spanish edition, made available in 1971, is now given in 28 states and the development of a French edition is presently being considered. A special edition is also administered to the visually handicapped.

In today's society the high school diploma has become a necessity not only for admission to college but for job application, retention and advancement. Each year an increasing number of adults take the GEDT in hopes of securing a high school equivalency diploma. There are currently more than 1,900 official test centers and the number of adults taking the exam has risen from 75,428 in 1962 to 387,733 in 1971. This increase in number is also seen in New York State where the total (not including penal institutions, hospitals and armed services) has increased from an estimated 6,000 in 1950-51 to 52,200 in 1972-73. It is estimated that 62,500 will be tested in 1973-74.

Not all adults who take the exam are successful in passing it. The percentage passing in New York State dropped from 57% in 1968-69 to 48% in 1969-70. In 1972-73 approximately 52% passed the exam. On a national level the percentage of failures has increased from 25% in 1962 to 31.1% in 1971.

Experts in the field attribute this raising failure rate to two factors. (1) The desire of large numbers of people for the tests has made it an acceptable thing to pursue. Public relations and advertisements have made it appear that the GEDT provides an easy way to obtain an equivalency diploma. Counselors in employment services, personnel directors and social workers encourage adults to take the test without realizing the proficiency necessary. The low fee or in some states the no fee requirement also encourages people to walk in. (2) The population taking the GEDT has changed. In the 1940s and 50s examinees were primarily high school dropouts who had acquired basic academic skills. In the 1960's the number of minority disadvantaged examinees with no prior formal high school experience has increased. Many of this population often enter the test without necessary verbal skills and adequate basic skills to pass the GEDT.

Many adults who are not successful with this 10 hour exam on their first attempt return to take the exam again. Others, either before or after one attempt, seek adult education programs which will help prepare them. In New York State in 1972-73 some 45,850 adults were enrolled in high school equivalency in local educational institutions. While the number is far greater than this when college, business and other private HSE programs are taken into account it in no way equals the need. According to the 1970 census in the State of New York there are almost 6,000,000 adults who do not possess a high school diploma. On a national level there are 60 million adults over 26 years of age who are without a high school diploma.

In order to improve high school equivalency programs and accommodate the large numbers of adults who can benefit from these programs, different formats of classroom management, materials and scheduling become necessary. To develop this environment, in many instances, a completely new format of instruction becomes necessary and requires the teacher and the administrator to perform vastly different roles in the high school equivalency preparation program than were historically viable.

Chapter II

CONTENT AND TECHNICAL FEATURES OF GED TESTS

Sources of information

The specific content of all forms of the Tests of General Educational Development is, of course, secure. However, general and technical information about the tests is both available and useful to staff and students of a high school equivalency program. The following sources of information can be obtained free:

- *High School Equivalency Testing Program of New York State-Information Handbook.* This booklet is designed for the student and includes an application form. Copies are available in quantity from: High School Equivalency Testing Program, The State Education Department, Albany, New York 12224.

- *High School Equivalency Examination Testing Schedule,* which includes a listing of test centers, is also available from the above office singly or in quantity.

- Curriculum resource handbooks are available to administrators from: Bureau of Continuing Education Curriculum Development, State Education Department, Albany, New York 12224. Titles in this series are:

  High School Equivalency: Part 1: Theory and Design of the Program
  Developing High School Equivalency Reading Skills
  Extending High School Equivalency Reading Skills - Part 1 - Literature
  Extending High School Equivalency Reading Skills - Part 2 - Science, Social Studies, and Mathematics
  High School Equivalency: English Language
  High School Equivalency: Mathematics
  High School Equivalency: Science

- *Examiner's Manual for the Tests of General Educational Development (Sixth Edition).* This manual provides information about test characteristics, normative studies, and interpretation of results that may be particularly useful in in-service training. It can be obtained by administrators

from the American Council on Education, One Dupont Circle, Washington, D.C. 20036.

Publications such as these will help the administrator in assembling the types of information that should be conveyed to staff and students so they will be well acquainted with the general features of their state's GEDT testing program. Such a compilation should include, for example:

- Application procedures, including eligibility and costs, which vary from state to state. There is no fee in New York State.

- Testing procedures, including testing centers and schedules. Tests are usually administered over a two-day period. A maximum of two hours working time is allowed for each of the five tests.

- What to bring to the testing center: identification, admission notice, two #2 pencils.

- Required minimum standard scores. In New York State: an average standard score of 45 (225 total for all five tests) with no single score below 35.

- Retesting, including mandatory two-month waiting period and different form required each time. States vary in their regulations. In New York State, when two or more forms of the tests have been taken the highest score obtained on each of the five tests (regardless of when each was obtained) is used in determining eligibility for the diploma.

- Special Procedures such as testing of handicapped; GEDT scores earned during military service; Spanish language version of GEDT; and, in New York State, equivalency diploma awarded on basis of college credit.

-and-

- Purpose, format, and general content of GEDT tests. (See following descriptions)

Purpose of GEDT tests

There are many ways in which technical information about the General Educational Development tests (GEDT) can be used to enhance program effectiveness. Staff, for instance, are greatly aided--in attitude as well as teaching--by an understanding of the test purpose and how it defines high school "equivalence" in terms of content emphasis and student

proficiencies. Students' self-confidence is bolstered if they have an idea of what they can expect on the tests and what the tests are going to expect of them. (See also Section V on Test Wiseness.)

Though there is no single rigidly-defined course of study leading to high school graduation across the country, there is a core of knowledge and skills that is included in most curricula leading to graduation. Thus, there is a body of understandings common to the background of most high school graduates. The individual tests are designed to measure an adult's performance in those fundamental areas covered by a high school education.

The publishers of the GEDT tests recognize that the many means by which non-graduate adults have acquired high school level skills vary considerably from the ways high school graduates learn their skills. It is for this reason that an effort is made within each individual test to measure as much as possible those skills which are retained by the high school graduate over a long period of time, rather than to test those specific facts and ideas which are learned during a course of study and then quickly forgotten. The minutiae of end-of-course subject examinations are avoided. The major objectives, or long term outcomes, of secondary courses and a secondary education are stressed.

The GEDT publishers elaborate:

> *The emphasis in the GED tests is placed on intellectual power rather than detailed content: on the demonstration of competence in using major generalizations, concepts, and ideas; and on the ability to comprehend exactly, evaluate critically, and to think clearly about concepts and ideas.**

This effort to measure long term objectives should not be taken to mean that no specific content is tested. The test descriptions which follow show that much of the English expression and the mathematics tests measure detailed subject matter content. The nature of these subjects is such that an understanding of their basic principles is often best measured by testing for specific skills and knowledge. The basic details of English Expression, once learned, are almost totally retained because of constant use. So, testing specifics is not inconsistent with the effort to test long term outcomes.

**Examiner's Manual for the Tests of General Educational Development (Sixth Edition).* American Council on Education: Washington, D.C., 1971, p. 6.

Description of the GEDT: Format and Content

There are five comprehensive tests, all of the multiple-choice type. A separate machine-scorable answer sheet is used. Following are descriptions of each test in the GEDT battery:

Test 1: Correctness and Effectiveness of Expression

This test presents a variety of item types (forms of multiple-choice) on spelling, capitalization, and punctuation as well as grammatical usage, sentence structure, and diction (word choice). In the spelling items, the examinee is presented with four separate words and required to select the one that is incorrectly spelled. If none of the words is misspelled, he fills in the fifth "no error" answer space for that question. All words present common spelling problems such as: vowel confusion, double consonant confusion, word endings with similar sounds. Capitalization and punctuation are tested by a series of sentences; each question consists of a sentence with four sections underlined. One error is to be detected in one of the four underlined sections; otherwise, the fifth choice of "no error" is selected. The usage section follows the same format as that of capitalization and punctuation and presents grammatical problems such as tense or subject-verb agreement. Knowledge of sentence structure is tested with several different item types. One type consists of an incomplete sentence followed by a choice of different ways of completing it; the examinee must select the best completion. Another type of structure item presents a complete sentence with one part underlined; the answer choices provide different ways of re-writing the underlined section. Each diction question consists of several separate sentences; the examinee must select the one sentence that contains an error in word choice. These item types are expected to be maintained through 1975. There may be some modification of item format after 1975.

Tests 2, 3, and 4: Social Studies, Natural Science and Literary Materials

Tests 2, 3, and 4 measure reading comprehension skills in the areas of social studies, natural sciences, and literary materials. Each test contains a series of reading selections that are reasonably representative of the type of material that might be studied in a traditional high school program. The reading selections are often very similar to textbook discussions of significant topics. The questions following each selection most frequently are based solely on the reading passage. However, once in a while, background information or concepts as well as information in the passage are needed to answer the questions. This background, composed of knowledge of general principles rather than particular facts, is of the type that should enable the examinee to deal intelligently with the text as well as the questions. For example, questions based on a passage dealing with a discussion of colonialism in India would not require a student to supply the exact date of India's emancipation, unless that date were imbedded in the reading. In order to be read with full understanding, however, the passage itself might require the student to have a feel for or knowledge of the underlying reasons which led to 18th century colonialism. In answering the questions, the student would be expected to reason, to evaluate critically, and to grasp literal and implied meanings.

This is the description of Tests 2, 3, and 4 supplied by the publishers of the GEDT battery:

> *Test 2: Interpretation of Reading Materials in the Social Studies.* This test consists of a selection of passages from the fields of economics, political science, history, sociology, and anthropology. Where appropriate, a chart, graph, or map supplements the passage or acts directly as stimulus material warranting interpretation. On the whole, items test the interpretation of information and ideas in the passages; in some cases, however, outside knowledge of very basic, general principles in the social studies familiar to the typical high school population may be required for answering items.
>
> *Test 3: Interpretation of Reading Materials in the Natural Sciences.* This test consists of a selection of passages from the field of natural sciences at the high school level and a number of questions testing the examinee's ability to comprehend and interpret the content of each passage.
>
> *Test 4: Interpretation of Literary Materials.* This test consists of passages, both prose and verse, taken from American and English literature, traditional and modern, and a set of items testing the examinee's ability to comprehend and interpret the content of each passage. The concept of literary interpretation utilized in this test includes the ability to understand the literal and figurative meaning of words as used in the context of the passage; the ability to summarize ideas, characteristics, facts; the ability to interpret the mood, tone, purpose, or intent of the passage; and the ability to determine the particular effects achieved by some of the simple literary techniques.*

In addition, questions testing a knowledge of literary terms are sometimes found on Test 4.

Test 5: General Mathematical Ability

This test covers topics taught at both the elementary and high school levels. Some topics which may be covered are: definitions, ratio, percent, decimals, fractions, mathematical symbols, indirect measurement, interpretation of graphs and tables, scale drawings, approximate computation, and units of measurement.

**Examiner's Manual for the Tests of General Educational Development. (Sixth Edition)* American Council on Education: Washington, D.C., 1971, p. 7.

Several questions are based on algebra and plane geometry concepts. Many of the techniques involved in those are taught both in upper elementary grades and in algebra and geometry classes. Questions frequently test knowledge of mathematical principles and stress their applications through the performance of mathematical operations and manipulations. The ability to express practical problems in mathematical terms is frequently tested. The test may also include one or two questions based on the concepts of modern mathematics.

Spanish Language GEDT - Brief Description

The first five tests of the Spanish GEDT are parallel to comparable tests in the English version. (The sixth test, a measure of competence in written English, is an option. New York State, for instance, administers only the first five tests.) The Spanish versions are not simply translations of English GEDT batteries. Though they parallel the English versions in their rationale and their coverage of learning areas, they are based on Latin American culture and the curriculum of high schools in Puerto Rico. (The tests were intended primarily for the mainland Puerto Rican population, but their suitability for other Spanish-speaking citizens such as Cuban immigrants and Mexican-Americans has been determined by Spanish curriculum specialists.) Procedures for defining test content, norming, and equating of the Spanish versions are similar to those employed with the English GEDT.

The Norm (Comparison) Group

To whom are the adults in your program being compared when they take the GEDT? The answer is that, in keeping with the test purpose of assessing major outcomes of a secondary-level education, the norm (comparison) group is composed of a representative sample of high school seniors.

Norms give meaning to an individual's raw score (which, on each of the five tests, is simply the number of correct answers). Taken alone, a raw score doesn't have much meaning because it is affected by test length as well as test difficulty. A raw score on a particular test takes on meaning largely through reference to bodies of data that describe how specified groups of students perform on that test. These bodies of data are the norms for the GEDT.

Norms make it possible to interpret the relative value of someone's score--to match that person's performance against the performance of a comparison group. In large testing programs like the GEDT, the norm (comparison) group is composed of a sample of the people it is intended to represent. (Sampling is, in effect, the creation of small-scale models of a larger population. It is used, for example, in public opinion polls.)

The norm group for the GEDT is representative of high school seniors nationally in terms of geographic location, school size, and ability levels. As of this writing, the GEDT battery has been normed three times--in 1943,

1955, and 1967. Another norming study is tentatively planned for 1975. The 1967 norming study included, in addition to accredited public high schools, a sample of all-black high schools (where they still existed) and of private high schools. Technical high schools and vocational high schools were not included.

In the history of the GEDT, over 30 forms in English for civilian and military use have been constructed and equated to current national norms (see discussion of Equating). The Spanish versons, first introduced in 1971, were normed on samples of high school seniors in Puerto Rico. Each year, one new form of the English and Spanish versons is made available and older forms which had heavy usage are then retired.

Explanation of Standard Scores & Percentile Ranks

In the 1967 GEDT norming study, as in the earlier studies, raw scores (number of correct answers) were translated into percentile ranks and normalized standard scores. (The normalized standard scores which appear on the GEDT score reports are McCall T-scores.)

Both standard scores and percentile ranks are derived scores. (Other examples of commonly-used derived, or "transformed," scores are grade-equivalent scores and intelligence quotients.) The usefulness of derived scores is that they permit comparisons that would be impossible to make if raw scores alone were used. Let us look at some of the ways derived scores are useful in test interpretation.

A standard score like the McCall T-score can be though of as a standard measure or medium of exchange. If you wanted to compare an inch and a yard, for example, you could convert both into feet. Analogously, raw scores on different GEDT tests can be compared by converting them to standard scores; this conversion is performed by means of mathematical transformation.*

Standard scores are thus the means of comparing raw scores. They make it possible to compare a candidate's performance from test to test and also enable each score to be averaged. The normalized standard scores used on the GEDT are based on percentile ranks, and therefore can be interpreted in terms of percentile ranks. An understanding of percentile ranks is, therefore, very important.

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*This analogy is not exact, however, because normalized standard scores like the McCall T-score are area, not linear, transformations. See measurement textbooks for explanations of the differences between standard scores and normalized standard scores. Normalized standard scores do modify, to some extent, the shape of the original distribution of raw scores. (Raw scores are converted to percentiles; then the raw scores are assigned the standard score values that these percentiles would have in a normal distribution.)

A person's percentile rank describes his relative standing within a particular group. For instance, a percentile rank of 84 means that a person's score was better than the scores made by 84% of the people in the group on which the test was normed. Percentile ranks should not be confused with percentage-correct, which tells us nothing about a person's performance relative to the norm group. Percentage-correct tells us only the percentage of test questions correctly answered. Depending on the difficulty of the test, obtaining a percentile rank of 84 may require more or less than a percentage-correct of 84.

Illustrated Standard Scores and Percentile Ranks

The illustration on page 11 can be used to show the relationship between the normalized standard scores found on the GEDT and percentile ranks. An illustration like this may, incidentally, be useful in any in-service training or in test orientation for candidates. In this illustration, let us assume that 1000 student campers took part in a two-month program in mountain climbing. At the end of the program, the campers took part in the camp's annual time limit race to the top of an 8000 ft. mountain.

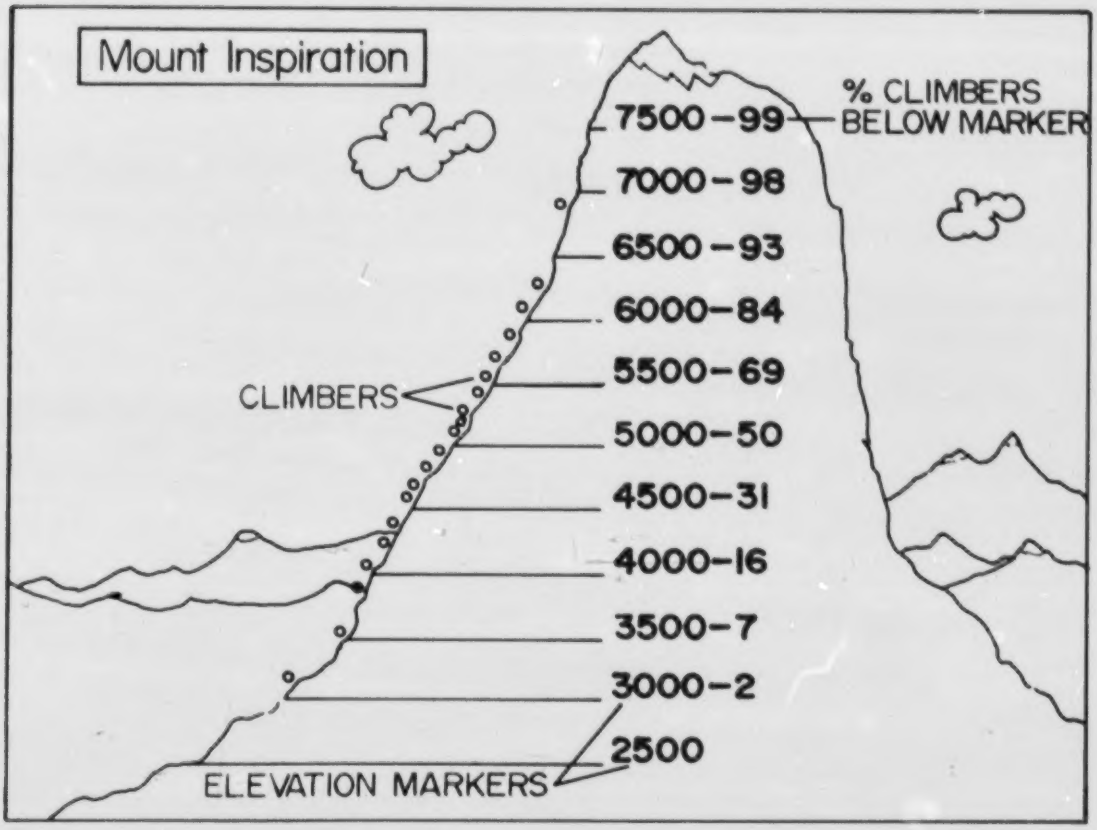
The camp officials put markers on the mountain every 500 ft. indicating changes in elevation. At the end of the time limit the position of each climber was recorded. There was considerable variation in the elevations which the climbers had reached. No one had reached the top, but a few were near the top. Most of the climbers were about half way up the mountain and a few were still near the bottom. In the following illustration, each small circle on the mountainside represents the elevation reached by 50 campers.

After the camp officials knew the elevation which the campers had reached, they could determine from their records the percentage of climbers which any given climber had surpassed. For example, they could determine that every camper in the race who reached an elevation of 6000 ft. had climbed higher than 840 out of every 1000 campers (84%). Similarly, those who reached 4500 ft. climbed higher than 310 out of every 1000 climbers (31%).

The next year the same mountain climbing race was held for campers who had only part of the mountain climbing course or had not taken part in the course at all. The camp officials could use the records obtained the previous year to compare these campers with the performance of the campers from the year before who had the full course in mountain climbing. For example, if a new climber climbed to 6000 ft., they could tell that he surpassed 84% of the climbers who had had the full mountain climbing course.

This same illustration can be used to explain the relationship between standard scores and the percentiles on the GEDT test. High school graduates across the country who took the GED test at the end of their senior year of high school performed on the test in much the same way as the campers who had had the mountain climbing course. Simply by mentally dropping the last two zeros from each elevation mark on the cartoon above, you can see how these graduates performed on the GEDT. The 6000 foot, 5500 foot and

foot elevation marks, and the others, become the standard scores which are reported to GED testees, 60, 55, 50, etc. The diagram then visually demonstrates the idea that persons who obtain a certain standard score on the GEDT (regardless of the time they spent in high school) perform better than a specific percent of high school graduates. It can be seen that a standard score of 60 would surpass the performance of 84% of the high school graduates.



The table on page 12 shows the standard score that is assigned for each percentile rank. The relationship shown in this table holds true for each of the five tests regardless of the form of the GEDT being used.

Percentile Ranks Corresponding to GED Test Standard Scores for Public High School Seniors Tested at Time of Graduation from a General (Non-Trade) High School*

Percentile Ranks for the Total U.S.	Assigned Standard Scores
99	75
99	74
99	73
99	72
98	71
98	70
97	69
96	68
96	67
95	66
93	65
92	64
90	63
88	62
86	61
84	60
82	59
79	58
76	57
73	56
69	55
66	54
62	53
58	52
54	51
50	50

Percentile Ranks for the Total U. S.	Assigned Standard Scores
46	49
42	48
38	47
34	46
31	45
27	44
24	43
21	42
18	41
16	40
14	39
12	38
10	37
8	36
7	35
5	34
4	33
4	32
3	31
2	30
2	29
1	28

*The mathematical rationale of the relationship between the percentile ranks and these standard scores can be found in statistics or measurement texts under the topic of "normalized standard scores". In brief, a normal distribution of scores having a mean of 50 and a standard deviation of 10 would have the percentile ranks shown above.

To summarize, let's look at an example of the way standard scores make possible the interpretation of raw scores. This example is drawn from scores for two tests on Form FF of the GED:

Test 1 (100 questions)

Raw Score	32
Percentile Rank	5
Standard Score	34

Test 5 (50 questions)

Raw Score	32
Percentile Rank	50
Standard Score	50

This student got 32 correct answers on both tests--identical raw scores. But his standard scores are enormously different, and they enable us to compare his performance on the two tests and to determine how well he did in comparison to high school seniors in general.

Equating

Many worries can arise out of misunderstanding or incomplete information about the technical aspects of testing. One such unwarranted concern is that some forms of the GEDT battery may be more difficult than others and that students taking such forms will be penalized. This possibility is avoided by means of equating, a statistical procedure that allows defined standards to be maintained as new forms are developed.

Equating takes into account the differences introduced by the use of tests with different sets of items. Typically, when two tests are equated, both tests are given to the same sample of individuals or to comparable samples of different individuals. This results in two distributions for the pair of tests. Respective percentiles are determined for each raw score in each distribution. A pair of raw scores (one from each test) is considered equated if the corresponding percentiles match. The GEDT has been built so that new forms are equated or anchored to previous forms that were developed during the norming period.

The table below illustrates how the equating process produces comparable standard scores. In this illustration, a candidate gets raw scores of 57, 50, 56, and 63 on Test 1 if he takes four different forms of the test. However, in each case he will receive a standard score of 47. It was ascertained in the equating process that each of these raw scores had a percentile rank of 38, so they were all assigned a standard score of 47.

Form	Test Number	No. of Questions	Raw Score	Percent of H. S. Graduate Lower Std. Score (percentile rank)	T Scale Standard Score
AA	1	100	57	38	47
EE	1	100	50	38	47
FF	1	100	56	38	47
HH	1	100	63	38	47

Minimum Score Standards for the Equivalency Diploma

Twenty-nine of the fifty states, including New York State, have the same two-part score requirement which must be satisfied before an equivalency certificate will be issued.* In these states a total standard score of 225 with no single score below 35 is necessary. The average score of 45 for each test is the "magic number" for everyone in equivalency preparation programs. The score of 35 insures that a recipient of an equivalency diploma has at least some proficiency in every basic skill area. What do these scores really signify?

Referring to the percentile chart shown earlier, when a candidate gets a standard score of 35 on a GED test he has surpassed the performance of 7% of high school seniors in the norms group for that test. Similarily a standard score of 45 on a GED test surpasses the performance of 31% of the high school seniors in the norms group for that test.

When the GED test is normed, there always are three or four high school seniors out of every 100 who score above 225 but score below 35 on one test. In states having the two-part score requirement given above, an adult who receives an equivalency diploma with just a minimum score actually has performed on the GEDT better than would about 35 out of every 100 high school graduates in the nation! Many adults obtain their diplomas with much higher scores.

Review Questions

1. A student at the 50th percentile on a GED test has a standard score of 50. True False

2. A student at the 50th percentile on a GED test has answered half the questions correctly. True False

3. A standard score of 65 or better is the score attained by 35% of the norm group for the GED test. True False

*Eight have higher requirements

4. Attaining the same standard score on two GED tests means that the student attained the same percentile rank on both tests. True False

5. The same standard score on two GED tests means that the student has the same raw score on both tests. True False

6. In order to obtain a passing standard score of 35, a candidate's score must exceed the scores of 7% of the graduating seniors in a nationwide sample of general high schools. True False

7. In order to attain the level of achievement required to obtain both a score of 35 on each test and a total score of 225 (the requirement for a New York State High School Equivalency Diploma) a candidate's score must exceed the scores of about 35% of the graduating seniors in a nationwide sample of general high schools. True False

Answers

1. True

2. False, except in rare cases where a percentage-correct of 50 happens to coincide with a percentile rank of 50. This would be unusual even on tests of 100 questions.

3. False. This represents a confusion of standard scores and percentiles. According to the table, a standard score of 65 has a percentile rank of 93% of the norms group scores below 65 and 7% score above 65.

4. True. The relationship between standard scores and percentile ranks on the GED test is constant.

5. False. The relationship between raw scores and standard scores is not constant. Depending on the length and difficulty of several different tests, identical raw scores may represent different percentile ranks--and corresponding standard scores. See example of scores on Tests 1 and 5 on page 13.

6. True

7. True

Chapter III

ADMINISTERING THE PROGRAM

Basic Instructional Unit

To maintain a proper balance between educational and cost effectiveness the basic instructional unit for a high school equivalency test preparation course should be comprised of no fewer than 8 and no more than 20 students. Groups of less than 8 should be brought up to at least 8 in order to keep per student costs at a justifiable level. Groups of more than 20 should be divided as follows:

# of students 20 students to an instructional unit	=	# of instructional units including a unit for any sizable remainder

Two examples are:

Example A

50 students 20 students to an instructional unit	=	2 full instructional units and a remainder of 10 students

Three instructional units could be instituted in this case and the instructional unit size equalized to 16-17 students each.

Example B

63 students 20 students to an instructional unit	=	3 instructional units and a remainder of 3 students

In this case just three instructional units would be set up. The three remaining students would be assigned to a waiting list. Because students in an HSE program are encouraged to take the GEDT as soon as they demonstrate readiness, openings occur steadily throughout the duration of the program to accommodate persons on a waiting list.

Minimum Schedule

For greatest educational impact no fewer than six hours of instruction should be offered in a normal week. Programs offering fewer hours per week tend to serve only those who need instructional services least, forcing those most in need of help to attend for more than one school year before they become "GEDT ready".

Staffing Patterns

Programs operating with close to the minimum suggested student load, i.e., approximately 8 students could conceivably operate with a single instructor. Programs with larger registration should consider the addition of another half-time instructor, allocating 225 instructional hours for 150 class hours - two instructors rather than one for 75 class hours, one instructor for the remaining 75 hours. The additional instructor could provide particular subject matter expertise or, even more importantly, could be used to augment the process of individualizing instruction.

Suggested staff competencies are in Chapter IV.

Use of the word "class" in this publication has been avoided and "instructional unit" substituted. The purpose is to emphasize that this manual describes the operation **new style** of HSE program.

This **new style** entails the following:

Programs to run at least 150 hours before recycling.

New students enrolled constantly during duration of program as long as each instructional unit does not exceed suggested maximum of 20.

Many students certified "GEDT ready" at entry and arrangements made immediately to take GEDT.

Minimum entry level of 7.0 grade equivalent in reading on a level of a standardized test designed to measure grades 7-9 achievement.

Students sent to take GEDT at any point in the program when they demonstrate readiness on a "predictor" test.

Diagnostic - prescriptive instruction performed in "learning laboratory" style.

Primary instructional emphasis given to increasing reading speed and comprehension skills.

Following in graphic outline are the main steps to implementation of the program.

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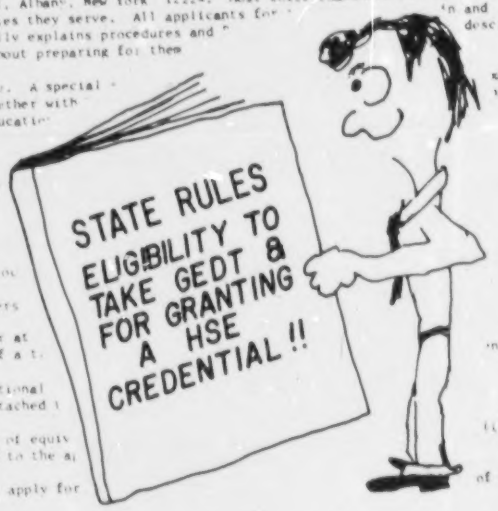
GENERAL INFORMATION

The New York State Education Department publishes a brochure: HIGH SCHOOL EQUIVALENCY TESTING PROGRAM INFORMATION HANDBOOK. This brochure is free. It answers almost all questions candidates and educators have about the Equivalency Testing Program. You can get it by putting "Information Brochure" and your name and address on the back of a post card. Mail the card to High School Equivalency Program, State Education Department, Albany, New York 12224. Most chief examiners for the Program have brochures for distribution to members of the communities they serve. All applicants for ...n and read a copy before filing an application. The brochure fully explains procedures and ... describes the content of the individual GED Tests and gives advice about preparing for them.

A Spanish language equivalency examination is now available. A special ... tion. For more information, put your name and address together with ... mail the card to Spanish High School Equivalency, State Educatio...



ELIGIBILITY

A. PERMANENT OR TEMPORARY RESIDENTS OF NEW YORK STATE for ... Diploma or apply for the DIPLOMA if they are

1) Over 19 years of age

or

2) Between 17 and 19 years of age and have been ou...

or

3) Between 17 and 19 years of age and were members ...

B. PERMANENT OR TEMPORARY RESIDENTS OF NEW YORK STATE for at ... under A above may be tested for TRANSCRIPT purposes if a t...

1) admission officers of post high school educational ... admission (the request for scores must be attached t...

or

2) recruiting officers requiring the submission of equiv... official request for scores must be attached to the a...

C. Candidates who are tested for transcript purposes may apply for ... above.

D. Persons who have already received ... the equivalency exa... quired to substanti...

STEP I. *ELIGIBILITY: States vary in eligibility requirements.*

APPLICATION PROCEDURES

Print everything on the application except your signature. Answer the questions in boxes only if the instructions tell you to. For item 3, list your New York State address. For item 11, you should list, if possible, phone numbers where you can be reached during the day as well as at night.

If you are applying only for a diploma based on satisfactory scores already obtained, mail your application directly to the State High School Equivalency Program office in Albany.

If you are applying for testing or retesting, send your completed application (with any required documents attached) to the testing center where you wish to be examined. HIGH SCHOOL EQUIVALENCY TESTING PROGRAM-INFORMATION HANDBOOK gives the testing schedules and addresses of all official testing centers. You can also get the names of nearby testing centers and learn when their next testings will be by calling the office of your local public high school.

After receiving your application, the testing center will tell you when and where to appear for testing. If you fail to appear for testing without giving the testing center at least five days prior notice, your failure to appear will be considered a cancellation of your application. To be scheduled for future testings, you must file a new application.

At the examination center you should be able to furnish proof of your identity and of having reached any minimum age required. Your fingerprints will be taken during each session of the examination.

TESTING CENTER LOCATIONS

Albany, Batavia, Binghamton, Brentwood, Buffalo, Dunkirk, Elmira, Freeport, Geneva, Glens Falls, Gloversville, Hicksville, Hornell, Huntington, Indian Lake, Jamestown, Lockport, Middletown, Newburgh, New York (14 locations), Niagara Falls, Nyack, Patchogue, Plattsburgh, Potsdam, Port Jefferson, Poughkeepsie, Riverhead, Rochester, Schenectady, Syracuse, Troy, Utica, Valhalla, Watertown, Yonkers.

RETESTING

There is a minimum 2-month waiting period between all testings. There are no exceptions. If you retest sooner, your answer papers will not be scored. You must take a different form of the equivalency examination every time you are retested. If you have taken all available forms, you must wait until another form is published. Do not apply for retesting until you have received results of the latest testing.

If your scores on a retesting do not meet minimum diploma requirements, your previous scores will be examined. The highest score you obtained on each part of the examination will then be used as the basis for determining your eligibility for the diploma. Thus, you have everything to gain and nothing to lose by retaking all 5 parts of the examination every time you retest. When you apply, you will automatically be scheduled for all 5 parts.

DET 803 (11 71) 150,000)
ITEM

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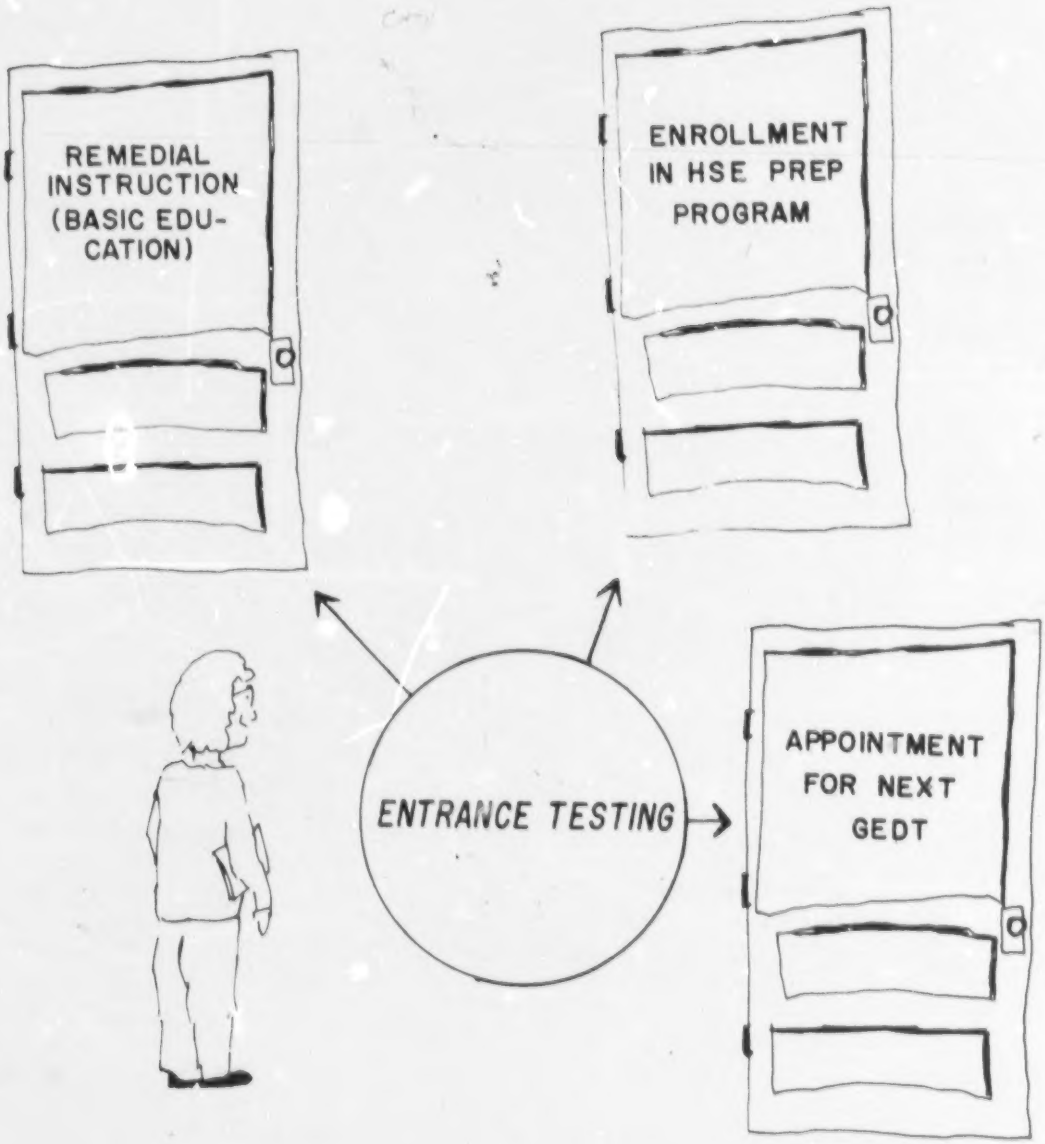

STEP 2. *ENTRANCE TESTING: Occurs continuously throughout duration of program.*

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	Last	First	MI	Dates of Sessions											Total
				5/1	5/4	5/7	5/8	5/13	5/14	5/15	5/20	5/21	5/22	5/27	
1	HAND,	LINDA		P	P	P	P	GEDT	MAY	10-11					
2	STUDENT,	RED	E.	P	P	P	P	P	P	A	P	P	P	P	
3	TRYING,	IMA		A	P	P	P	P	P	P	P	A	P	P	
4	Willearn,	Willie		P	P	P	P	GEDT	MAY	10-11					
5	FRACTION,	Averill		P	P	A	P	P	P	P	P	P	P	P	GEDT JUNE
6	Pedant,	Patricia		P	P	P	P	P	A	A	P	P	P	P	GEDT JUNE
7	Gedz,	Ted		P	P	P	P	P	P	P	P	P	P	P	
8	Quitter,	Andy		P	A	A	A	A	A	A	P	A	A	P	
9	Learner,	E Z				E	P	P	P	P	P	P	P	P	
10	Learner,	Lois				E	P	P	P	P	P	P	P	A	
11	Menow,	Mary						E	P	P	P	P	P	P	
12	Usall,	Honor						E	P	A	P	P	P	P	
13	Better,	Nancy						E	P	P	P	P	P	P	
14	Leader,	Neville	A.						E	P	P	P	E	P	GEDT JUNE
15	Constable,	Guy											E	P	GEDT JUNE
16	Burger,	Don													
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															

STEP 3. ENROLLMENT OF ELIGIBLE STUDENTS IN HSE PREPARATION PROGRAM: Enrollment occurs continuously.

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CLASSIFICATION OF ITEMS IN TEST 5

Skill Classification	Form X-4		Form Y-4	
	Total Items	Specific Items	Total Items	Specific Items
A. Ability to comprehend what is stated in a selection				
1. To locate and understand important facts	6	2, 5, 6, 9, 73, 79	5	4, 13, 76, 78, 80
2. To [illegible]	1	[illegible]	13	6, 9, 10, 20, 24, 25, 33, 38, 39, 42, 45, 55, 71
3. To [illegible] problem under discussion	[illegible]	[illegible]	5	1, 29, 32, 57, 64
B. Ability to interpret what is implied in a selection				
1. To evaluate the importance of ideas, to recognize simple relationships, and to draw valid inferences	18	1, 4, 8, 10, 17, 21, 24, 27, 31, 33, 39, 44, 47, 48, 67, 68, 74, 76	14	3, 5, 7, 16, 19, 31, 36, 37, 44, 47, 49, 53, 54, 63
2. To extrapolate presented ideas to new but related situations	5	11, 28, 35, 51, 78	2	23, 51
3. To deduce immediate conclusions and consequences	4	22, 25, 34, 62	10	2, 8, 34, 35, 40, 45, 48, 52, 77, 79
C. Ability to analyze and evaluate a selection critically				
1. To recognize implicit assumptions and their point of application	1	80	1	22
2. To differentiate fact from opinion	3	19, 60, 64	1	26
3. To recognize generalized relationships between principal ideas	6	23, 38, 45, 56, 58, 59		
4. To demonstrate awareness of the writer's motives, approach, biases, argumentative techniques, and point of view	7	15, 16, 54, 55, 57, 63, 66		
5. To judge the relevance of facts for the author's conclusions	6	13, 20, 40, 41, 43, 46		
6. To derive principal conclusions and generalizations from the selection	6	7, 26, 29, 37, 49, 71,		
7. To discover weaknesses, contradictions, and errors in the logical development of a selection	2	14, 61		

• STEP 4. DIAGNOSIS AND PRESCRIPTION

Averill Fraction

Social Studies PRESCRIPTION

1st deficient area - drawing Inferences

LTI BK. I pp 95-113

Tactics in Reading Cit Icards 35-38

Barron's Reading Interpretation Tests bk pp. 67-73

May 5-8

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STEP 5. *INSTRUCTION: Individual and group.*

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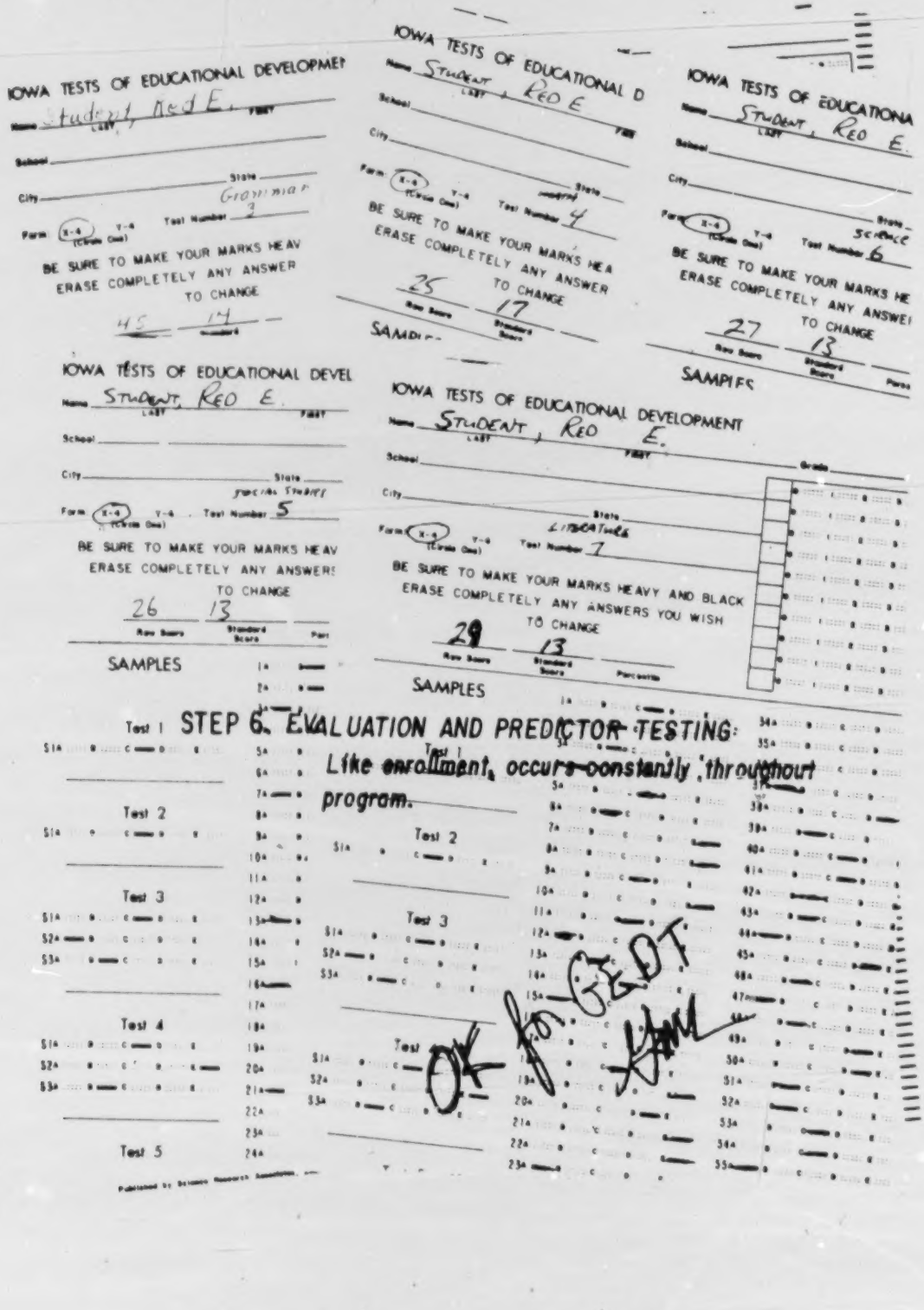


STEP 6. EVALUATION AND PREDICTOR TESTING:

Like enrollment, occurs constantly throughout program.

OK to GET

7

Each of these graphically illustrated steps is explained in detail below.

Eligibility

States vary widely in their requirements for persons to try the GEDT. Enrollment criteria for HSE preparation programs usually reflect these state requirements. Some states demand specific course requirements coupled with passing the GEDT in order for a person to earn a high school equivalency diploma. Other states do not issue a high school equivalency diploma, but allow local school districts to use the GEDT as a criterion for issuing a local "general" diploma. No one publication can remain current concerning so many differing and changing requirements. It is imperative that teachers, learners and administrators concerned with HSE preparation programs become acquainted with their state regulations.

Entrance Testing

There are three possible steps to entrance testing:

A. Locator testing
B. Achievement testing
C. Predictor testing

Most students will not undergo all three steps.

The main purpose of entrance testing, or screening, is to determine which registrants are operating on at least a seventh grade reading level, generally considered to be the minimum prerequisite for entrance into an HSE preparation program. The most obvious way to do this might be to administer a standardized reading achievement test (grade 7-9 level) to all registrants, but threr are two very real dangers in giving "all comers" such a test:

A. Low level readers will undergo a psychologically damaging experience as they attempt to cope with a test which is well beyond their abilities. A natural effect is for them to become test shy.

B. Adult basic education programs to which many of these low level readers will be referred may encounter considerable resistance to their attempts to retest on a level more suitable to the abilities of these students. Yet, such retests will be necessary if the ABE program is to instruct effectively.

Perhaps the best method to be employed is a three stage screening process:

A. Locator Testing

Locator tests rarely take more than two minutes, and they serve to indicate which students should not be given a

standardized reading test but should instead be referred to adult basic education for remedial work. Students are asked to read orally from a graded word list or from a series of short graded passages. Another option is to have students complete a brief pencil and paper reading or vocabulary test. In either case the process identifies low level readers who are not given a reading achievement test.

B. Achievement Testing

Persons indicating readiness on the locator test, to handle a standardized achievement reading test designed for use at the 7-9 grade level, would be administered such a test.

Examples of appropriate tests and levels appear below:

Test	Publisher	Level
Metropolitan Achievement Test	Harcourt Brace	Advanced
Iowa Test of Basic Skills	Houghton Mifflin	Grade 7
California Achievement Test	CTB/McGraw Hill	Level IV
Stanford Achievement Test	Harcourt Brace	Advanced

Most of the above are available in full battery or single section form. Only the vocabulary and reading comprehension sections need to be administered for screening purposes. (Some programs suggest giving mathematics and English usage sections as well to generate diagnostic information.) Because most low level readers are screened out by the locator process, the majority of registrants who are administered the reading and vocabulary sections will score at or above the minimum requirement of a 7.0 grade level. However, only those who do achieve a 7.0 total reading grade level score will be eligible for the HSE preparation program. Those scoring below this acceptable minimum will be referred to adult basic education or other sources of remedial instruction.

B. Predictor Testing

It is reasonable to assume that some students accepted into a HSE preparation program come to the program in a more advanced state of preparation than others. Some may even be able to pass the GEDT without instruction. An astute program manager would certainly want to employ a testing instrument to identify students who enter the program "GEDT ready" or to determine when other students reach a state of "GEDT readiness". He would likely use some form of standardized test designed for use at the high school senior level.

Several such standardized test batteries exist. One of them, the Iowa Tests of Educational Development Form X-4 and Y-4 has been used extensively enough for researchers to correlate success on the ITED with success on the GEDT. The construction

of such a correlation was enhanced by the fact that tests 3, 4, 5, 6 and 7 of the Iowa Tests of Educational Development bear almost the same titles as the five subtests of the GEDT. A summary of this study can be found on pages 29 and 30.

In order to identify

Which students need no instruction at all to pass the GEDT

and

Which students need no instruction whatsoever in one or more of the five areas of the GEDT

and

Which students require "across the board" instruction

A predictor test such as ITED Y-4 should be administered to all enrollees early in the program.

A test such as ITED Y-4 serves a predictor function for high scorers; sufficiently high scores will indicate immediate readiness for the GEDT and should be referred for testing. For students obtaining lower scores, however, the ITED Y-4 would serve as a gross diagnostic test providing rough indications of students' status in the five GEDT areas. Often this test reveals that a student is "GEDT ready" in one or more of the five areas, but not all. On the Flow Chart of Screening Process (page 31) and in subsequent references this test will be called the predictor/diagnostic test because of its dual function.

Enrollment

Persons demonstrating "GEDT readiness" on a predictor/diagnostic test should receive classroom instruction only if empty slots exist and if there will be a delay of three weeks or more before their being able to try the GEDT.

All others having achieved at least 7.0 on the standardized reading test but not having done well enough on the predictor/diagnostic test to warrant immediate sign-up for the GEDT should be enrolled in the HSE preparation program to begin instruction immediately. The screening process of locator-standardized-predictor/diagnostic testing should be an ongoing process. It should be possible to fill slots at any point in the duration of the program. Enrollment is continuous.

Diagnosis and Prescription

Specific skills must be isolated and defined for each of the five subtest areas of the GEDT. Specific diagnostic instruments must be designed or secured to measure a student's status in relation to each

skill. Individual prescriptions should be developed jointly with each student, detailing steps and materials necessary to master each unlearned skill. A complete section devoted to diagnosis, prescription, and instruction appears below. At this point it will suffice to emphasize:

> No student will receive instruction in subject areas which he has already mastered.

Instruction

Several basic principles are worth consideration by the program administrator who must supervise the instructional program:

> Most instruction is conducted on an individualized basis.
>
> A wide variety of self-directed materials must be available on site for students to follow their individual prescriptions. Although most or all of these materials will be "software", the HSE classroom becomes in a sense a "mini learning laboratory".
>
> Group instruction can be a refreshing change of pace from individualized learning, but group instruction can only be justified by common need. Consequently, most group instruction will involve only some of the students present at any session and will be most successful if conducted in an adult, seminar fashion.

Once a skill sequence has been defined for each subtest area, the appropriate materials should be selected and purchased. Both program management and instructional personnel should be involved in this selection process. A materials order list might include omnibus review books designed especially for GED candidates, texts or workbooks devoted to specific subjects or skills and even hardware items, especially those used to increase reading speed or power.

In general, materials should be amenable to self instruction with clear explanations, good model solutions to typical problems and containing adequate provision for practice of new skills. The redefined role of the instructor as a prescriber of activities and materials rather than lecturer and demonstrator means that much of the instructional responsibility must be transferred to the materials themselves. A "rule of thumb" would be $35.00 per slot for allocation of materials in a program which is just getting started. Most materials would remain onsite; a few workbooks might be designated for both school and home use. Materials costs for subsequent cycles would be limited to the cost of replacing items consumed or lost during the previous cycle.

Evaluation

A. Student Evaluation

> Constant evaluation takes place as students complete prescriptions and must demonstrate specific skill mastery before moving

on to new prescriptions.

When in the opinion of the instructor, a student has made sufficient progress and is ready to try the GEDT, he should first be administered an alternate form of the predictor/diagnostic test which he took after enrollment. (For example, if the ITED Y-4 battery was administered after enrollment, the ITED X-4 would now be used.) If the student were to attain the minimum scores for which GEDT success is predicted, he would make arrangements to take the GEDT at the earliest opportunity. On the other hand, should the student still indicate deficiency in some area or areas, the instructional focus could be narrowed to treat only these deficiencies until the student was again ready to try appropriate sections of a predictor/diagnostic test.

B. Program Evaluation

Evaluation of a total program should, of course, be based primarily upon number of students passing the GEDT. This data, compared with entry level of participants, number of hours to complete preparation and cost are the factors which provide the best analysis of program effectiveness.

In order to maintain pertinent data a sample report form can be found on pages 32 and 33.

GEDT Expectancies Based on ITED Scores

The following chart indicates the probable GED score which can be expected when correlated with a score on the Iowa Test of Educational Development, Form X-4 when this test is used as a prognosticator.

These results were derived from the scores attained by a population of 472 students enrolled in a High School Equivalency Preparation Program to whom were administered the ITED, Form X-4 subtests 3, 4, 5, 6, 7, shortly before taking the GED.

You will note that a standard score of 13 on the subtests of the ITED indicated a successful performance level on the GED examinations.

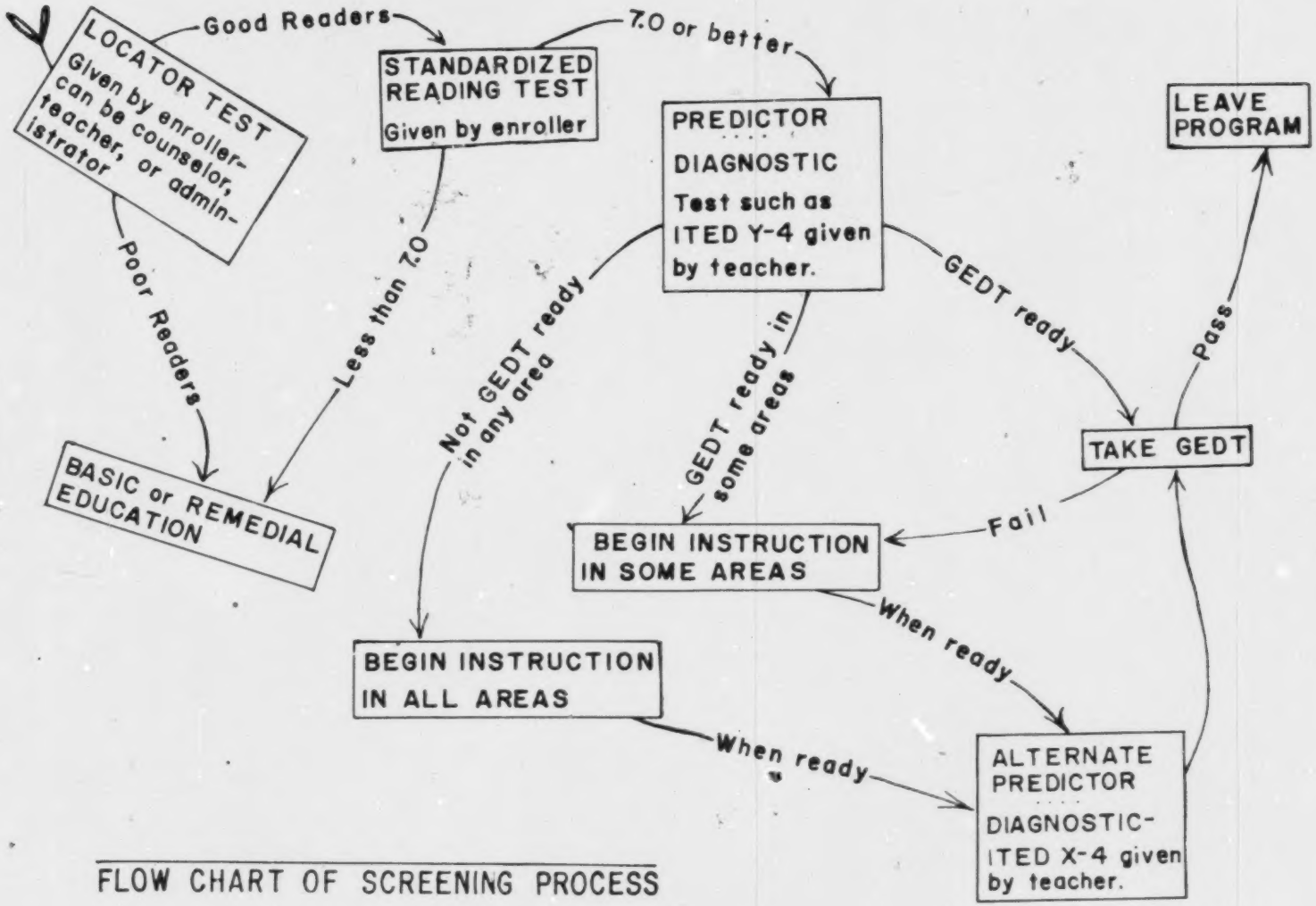
Below are listed the various subtests of the ITED, Form X-4, and the corresponding GED subtests.*

ITED	GED
3 - Correctness & Appropriateness of of Expression	1 - Effectiveness & Correctness of Expression
4 - Ability to do Quantitative Thinking	5 - General Mathematical Ability
5 - Ability to Interpret Reading Materials in the Social Studies	2 - Interpretation of Reading Material in the Social Studies
6 - Ability to Interpret Reading Materials in the Natural Sciences	3 - Interpretation of Reading Material in the Natural Sciences
7 - Ability to Interpret Literary Materials	4 - Interpretation of Literary Materials

* From results obtained in a New York State Education Department study.

ITED - GED Correlations

ITED - Standard Scores for Subtests 3, 4, 5, 6, 7	Equivalent GED Scores				
	Test #1	Test #2	Test #3	Test #4	Test #5
37	75	75	75	75	75
36	75	75	75	75	75
35	75	75	75	75	74
34	75	75	74	75	73
33	74	74	73	74	73
32	74	74	72	73	72
31	73	72	72	73	71
30	72	71	71	72	69
29	72	68	68	72	68
28	71	65	65	69	65
27	69	64	64	66	64
26	66	62	62	64	63
25	64	60	61	62	61
24	62	58	59	61	60
23	61	57	57	59	59
22	58	56	56	58	58
21	56	55	55	56	57
20	55	53	54	55	56
19	53	52	53	53	55
18	52	51	52	52	53
17	50	50	52	51	52
16	48	48	49	49	51
15	46	47	48	48	50
14	45	46	47	47	49
13	43	45	45	45	47
12	42	44	44	44	46
11	41	42	43	43	44
10	39	41	42	41	43
9	37	38	40	39	41
8	35	36	38	38	39
7	34	34	36	36	37
6	33	33	35	35	36
5	31	31	34	34	34



FLOW CHART OF SCREENING PROCESS

High School Equivalency Cumulative Record Form

1. Student Name _____ _____ ___
(Last) (First) (M)

2. Date of Birth: ___ ___ ___ 3. Sex: Male ☐ Female ☐
Mo. Day Year

4. Ethnic Background: White ☐ Black ☐ Hispanic Origin ☐ Other ☐

5. Is student a veteran of Viet Nam war? Yes ☐ No ☐

6. Last grade completed in school: ☐

7. Date of entry into program: ___ ___ ___
Mo. Day Year

8. Has student previously taken GED test? Yes ☐ No ☐

9. Reason for seeking High School Equivalency Diploma (check one):

a. To obtain employment ☐ d. Further education ☐

b. Retain present job ☐ e. Self-improvement ☐

c. Job advancement ☐ f. Other ☐

10. If withdrawn before completing program, indicate date withdrawn:

___ ___ ___
Mo. Day Year

Reason for withdrawal:

a. Program not meeting needs ☐ c. Personal problems ☐

b. No time to do necessary studying ☐ d. Other ☐

11. Is student enrolled in a Spanish High School Equivalency Class? Yes ☐ No ☐

(If yes, do not complete questions 12, 13 and 14. Go directly to questions 15 and 16.)

12. Reading grade level prior to entrance in program _____
(Check test used to determine reading level) _____

1. CAT Level 4 ☐ 4. ITBS (grade 7, only) ☐

2. MAT (advanced level) ☐ 5. Other (specify)___ ☐
_____

3. Stanford (advanced level only) ☐ _____
_____

13. Diagnostic test results (not applicable for Spanish GED students) - ITED Y-4:

Subtests: [ ] [ ] [ ] [ ] [ ]
#3 #4 #5 #6 #7

Specify test used if not ITED: _____ [ ]
#8

14. Predictive test results (not applicable for Spanish GED students) - ITED X-4:

Subtests: [ ] [ ] [ ] [ ] [ ]
#3 #4 #5 #6 #7

Specify test used if not ITED: _____ [ ]
#8

15. Actual hours of attendance in the High School Equivalency Program [ ]

16. Date student referred to GED test: ___ ___ ___
Mo. Day Year

17. GED test results:

1. Date of first test: ___ ___ ___
Mo. Day Year

Test Center _____

Subtests: [ ] [ ] [ ] [ ] [ ] Total Score [ ]
#1 #2 #3 #4 #5

2. Date of second test: ___ ___ ___
Mo. Day Year

Test Center _____

Subtests: [ ] [ ] [ ] [ ] [ ] Total Score [ ]
#1 #2 #3 #4 #5

Chapter IV

PROGRAM OPERATION

Rationale

This section of the guide is directly aimed at providing a model of a systems approach to individualizing the GED preparation process. The open ended program requires high level management skills. This section is an attempt to provide an exemplar of methods to manage specific problems arising in this course of study. The format is interactional, that is you read for information, are presented with a possible management problem and then you are questioned about the management solution and receive possible answers to the questions. This format was used to involve you as much as possible in your own instructional/learning process. Take your time working with the material. It is not light reading. An index of topics is provided for reference.

WHAT SHALL MY STAFF TEACH?

Given the time available to the candidate for the GEDT it can only be counted as fortunate that we are involved in a training venture rather than an exclusively educative venture.

Training implies learning for use in a predictable situation; education implies learning for use in unpredictable situations. The development of a training curriculum begins with a (content) job analysis in which the tasks to be performed and the knowledge, skills, and attitudes needed to perform them are identified (Johnson, 1967, page 132).

Since HSE preparation is a relatively predictable task it is subject to content analysis. Once the content has been analyzed into its subskills we can teach the component subskills. We assume that the sum of the subskills is equal to the whole.

Process and Content

We have learned that the test is divided into five subject matter areas each having a process and a content.

The following chart demonstrates the content/process component for each of the five subject areas.

CONTENT PROCESS CHART

SUBJECT AREA	CONTENT	PROCESS
Mathematics	axioms vocabulary	using operations
Grammar	syntax	editing
Literature	literary forms vocabulary	reading
Social Studies	specific content vocabulary/concept development	reading
Science	specific content vocabulary/concept development	reading

We can reorganize the data to show the relationship of the content to the process.

MANAGEMENT PROBLEM I

A. Your HSE instructor has planned his curriculum* for the 150 hour session. Under grammar, you see the following curriculum items:

Objective 42 Use of comma

43 Diagramming sentences

44 Capitalization

Which would be an inappropriate item for this class?

42, 43, 44

B. You walk into Mr. Jones' classroom one evening and he is conducting an experiment on Boyles' Law.

1. The concept is appropriate but the method of instruction is inappropriate for high school equivalency classes.

2. The concept is less than appropriate but the method of instruction is satisfactory.

3. The concept and the method of instruction are inappropriate.

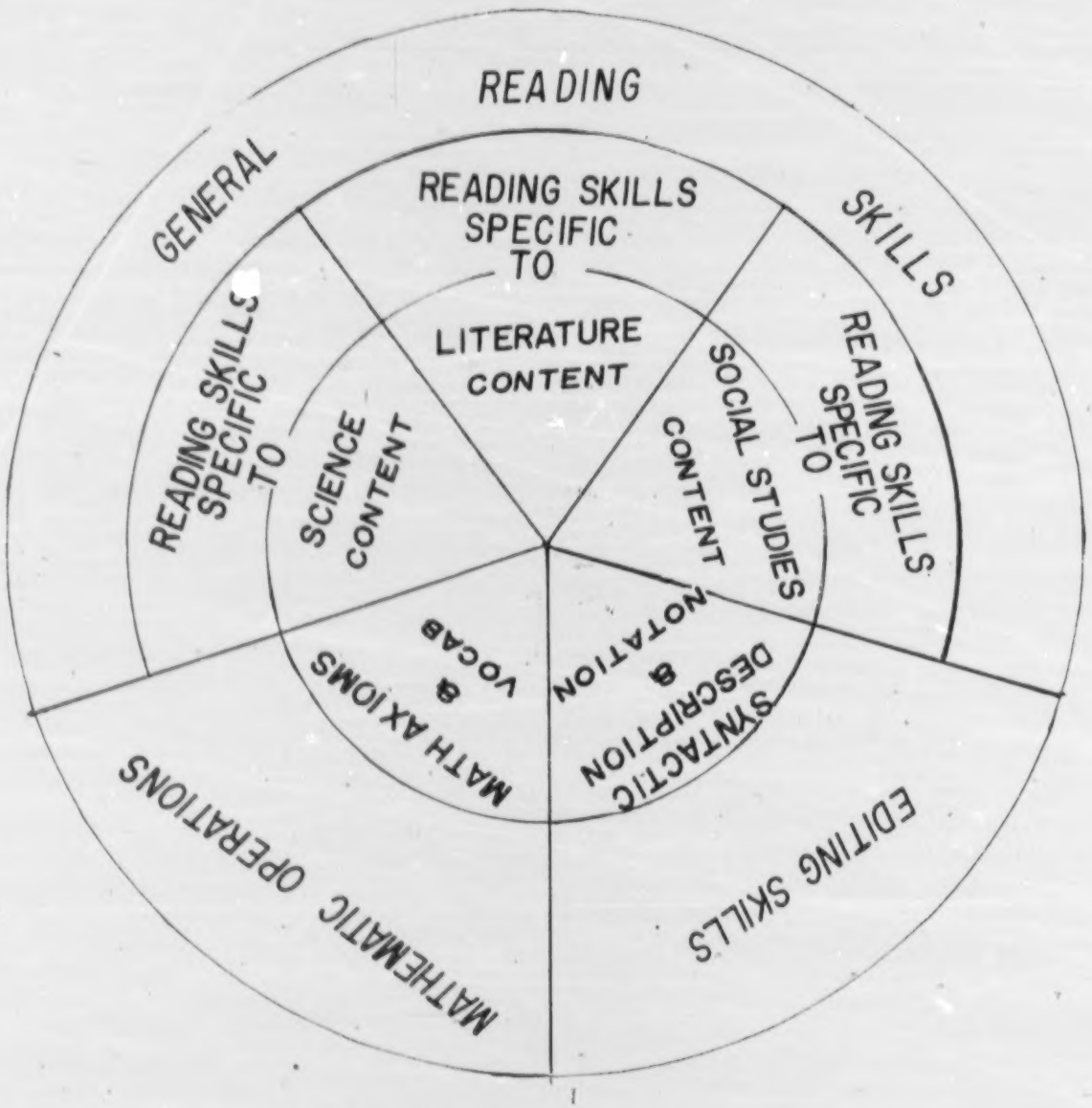
FEEDBACK

A. Because candidates will not be asked to diagram a sentence but will be asked to punctuate a sentence or capitalize a sentence, 43 is inappropriate.

B. Boyles' Law is suitable content but the vehicle of instruction should be reading, not experimentation, because the test is a science reading test.

*Curriculum is a structured series of intended learning outcomes. (Johnson, 1967)

PROPORTIONAL RELATIONSHIP OF CONTENT TO PROCESS



HOW DO I STRUCTURE THE CURRICULUM?

ITED X-4 and ITED Y-4 are very similar in form and content to the GEDT. The GEDT is not available for content analysis. We could analyze one of the appropriate forms of the ITED and by analogy infer the content and process of the GEDT. As a first step, this procedure will give a good picture of the curriculum to be structured, but should not be considered definitive. Additions will be necessary as the teacher gains experience.

Suppose that one item determined by this content analysis is vocabulary. A good curriculum guide for reading will list a large number of subskills for vocabulary development. The HSE instructor, using some criterion, should choose and sequentially arrange those subskills intended to be taught.

MANAGEMENT PROBLEM II

Suppose you made a routine check into the curriculum of the course before the course began and you saw the following:

Vocabulary development

Use list of master roots in its entirety provided in Developing High School Equivalency Reading Skills Curriculum Resource Handbook (page 3) published by New York State Education Department.

What would you say?

A. *Your curriculum development has been adequate and sufficient.*

B. *Your curriculum choices are overly specific and cumbersome for the time and task involved.*

FEEDBACK

A. If you chose "A" above, you would still be thinking of a preparation program that has lots of time and can afford a leisurely pace. In 150 hours the student must only do what is necessary. The entire list is excessive.

B. If you chose "B", you are aware of the need to establish priorities in terms of time available to do the job.

WHAT MATERIALS SHALL I ORDER?

Once the curriculum is identified and sequenced it becomes necessary to choose materials to achieve the intended learning outcomes.

Commercial Materials

There are any number of good commercial materials available. Samples of the material could be examined and the index or table of contents should be cross referenced with the curriculum list. The materials with the most complete coverage of items should have first preference.

Teacher-made Materials

Where commercial material is not immediately available or the material available is poorly done, the teacher may wish to construct his own materials to teach efficiently a curricular item. Such a procedure is to be encouraged to the extent that it is necessary and and discouraged when the task can become prohibitive in time and energy consumption. The management of this program places many demands on the staff so material construction should be kept at a minimum, especially at the beginning.

MANAGEMENT PROBLEM III

You have designed the materials selection chart (page 41) to help you make rational material selection decisions. You have received sample copies of new material and you have some remaining materials from former HSE classes.

You have reviewed the materials using the specified criteria at the top of the chart (page 41).

A. *Of the four series, which would you consider the poorest value?*

B. *Of the four series, which <u>two</u> appear to be the best for money?*

C. *If you do not order PZQ, how will you get instructional materials for the remaining four objectives?*

FEEDBACK

A. ABC because it covers only three curriculum items and the readability is 4.0.

B. XYZ and PZQ because they cover the most curriculum items. PZQ is more expensive but there is more practice provided.

C. If you are limited to one series, the deficiency can be made up by teacher-made materials but hopefully you are not limited to one series and then you could order both XYZ and PZQ.

GENERAL READING CURRICULUM

CURRICULUM ITEMS / SELECTION CRITERIA	XYZ					PZQ					ABC					DFM				
	Readability 7.0	Sufficient Heavy Practice Medium Light	Unit Cost $1.59 Ea.	Curriculum Items 11	Readability 10.0	Sufficient Heavy Practice Medium Light	Unit Cost $2.00	Curriculum Items	Readability 4.0	Sufficient Heavy Practice Medium Light	Unit Cost $1.75	Curriculum Items 3	Readability 8.0	Sufficient Heavy Practice Medium Light	Unit Cost $1.75	Curriculum Items 4				
2.10 Main Idea (Location)																				
2.11 At Beginning	X				X								X							
2.12 At End	X				X								X							
2.13 In Middle	X				X								X							
2.14 Inferred	X				X								X							
2.20 Main Idea (Organization)																				
2.21 Causation	X																			
2.22 Classification	X																			
2.23 Comparison	X																			
2.24 Sequence	X																			
2.30 Vocabulary Development																				
2.31 Using Context	X				X						X									
2.32 Prefix, Suffix, Roots	X				X						X									
2.33 Figurative Language	X				X						X									

DO I REQUIRE THAT THE INSTRUCTOR TEACH EVERY CURRICULUM ITEM TO EVERY STUDENT?

NO! The curriculum is in a totally idealized form. It is a guide, not a mandate. It is the course of study for a mythical student who would attend 150 hours of instruction and complete all assignments in the allotted time. The actual student rarely fits this ideal. The adult learner has a unique profile of abilities and deficiencies. We use a diagnostic procedure to compare the learner's profile of knowledge and skills with the ideal that is illustrated by the curriculum. Through diagnosis the instructor chooses from among the available curriculum categories only those in which the student is deficient.

Testing is vital to this type program. It is discussed in the administrative section. Let us consider the instructor's role in the testing aspects of the program.

The Instructor as Tester

Since the teachers time should be considered as the most valuable resource of the program, locator and achievement testing can best be done by other than instructional personnel. Experience indicates that paraprofessionals can administer these tests. It should be the responsibility of the instructional specialist and teachers to interpret these tests.

MANAGEMENT PROBLEM IV

You have given a locator test to four students and you want to match the students to available achievement tests. How would you do it?

Match letter of test to locator score.

Student	*Locator*		*Available Tests*
John Doe	*6.5*	____	*(a) CAT 4*
Mary Smith	*11.5*	____	*(b) ITED X-4*
Dina Davis	*5.0*	____	*(c) ITED Y-4*
Don Dale	*13.5*	____	*(d) None of these*

FEEDBACK

A. John Doe got a 6.5 on the locator and although that is below the entry level it is close enough to allow him to take the placement test. The locator is not an accurate test and he deserves a chance on a longer, more accurate instrument.

B. Mary Smith got an 11.5 on the locator. She should take the level 4 on the CAT 1970 since that covers advanced skills. You could give the ITEDs here but a locator test is not sufficiently accurate to justify putting the student through five hours of testing.

C. Dina Davis - none of these. Dina is not a candidate for this program since she appears to need adult basic education. You could arrange that for her.

D. Don Dale got a 13.5*on the locator. He is obviously well qualified to take the achievement examination and will probably score well above the minimum reading grade level of 7.0.

*Note: If you have designed your own informal locator process, grade level equivalents of raw score totals will not be available to you. Repeated use will indicate what level of performance would indicate ability to handle a grade 7-9 level standardized test.

HOW DO I DIAGNOSE MY STUDENTS?

For the purpose of this discussion we will confine ourselves to two kinds of diagnostic testing:

A. Gross categorical diagnosis from the result of continued test analysis.

B. Informal pre-test and post-test in particular curriculum areas.

When the instructional specialist looks at the results of the diagnostic testing, he will not only be looking at the level of achievement but will be concerned mainly with the quality of achievement. He will use it as a road map to guide the choices of curriculum and instructional materials for the student. Achievement tests are the first indication of the student's weaknesses and strengths available to the instructional specialist. If you are fortunate, you will be using a test that has a content analysis already constructed. If you are using a test that has no content analysis provided, it will be necessary to construct one. Once a student profile has been determined, the specialist can eliminate blocks of the curriculum where the student appears to have mastery and arrange the remaining areas of the curriculum for instruction.

MANAGEMENT PROBLEM V

The chart containing classification of items in test 3 is the content analysis of ITED X-4 and Y-4. The circles represent errors and have been placed randomly. Using this chart (page 46) answer the following questions:

A. *Which two areas appear to be least in need of instruction?*

1. *J and I*
2. *E and F*
3. *J and G*

B. *Which two areas appear to be in most need of instruction?*

1. *J and A*
2. *E and C*
3. *B and D*

C. *Paragraphing has one item and the student has failed to answer that item correctly. What do you do?*

1. *Give exercises in paragraphing.*

2. *Ignore the item.*

3. *Test further using an informal inventory.*

FEEDBACK

A. J and G are correct because no item was missed in J and only two items were missed in G.

B. E and C are correct. This was difficult but the number wrong in relationship to the number tested is greater for these two.

C. The best answer is 3 since the test gives only a hint of the direction to go. Further testing will pinpoint the source and the depth of the difficulty.

CLASSIFICATION OF ITEMS IN TEST 3
Iowa Tests of Educational Development

Content Area	Form X-4		Form Y-4	
	Total Items	Specific Items	Total Items	Specific Items
A. Diction; appropriateness of content	47	7, 9, 10, 11, 12, 15, 16, 17, 20, 22, 23, 27, 31, 33, 35, 39, 40, 43, 48, 49, 50, 51, 53, 54, 55, 56, 58, 59, 60, 61, 62, 64, 65, 66, 68, 69, 70, 71, 73, 74, 75, 77, 78, 79, 81, 83, 84	42	3, 5, 8, 9, 10, 11, 13, 14, 15, 16, 19, 20, 21, 22, 23, 25, 26, 28, 30, 32, 34, 35, 36, 37, 38, 39, 41, 46, 47, 50, 52, 59, 67, 70, 71, 72, 77, 78, 81, 82, 83
B. Colloquialisms; words often confused	6	4, 25, 30, 34, 41, 42	3	12, 61, 66
C. Verb forms	8	13, 21, 28, 34, 37, 38, 43, 58	8	13, 24, 44, 53, 74, 75, 77
D. Pronoun forms	3	32, 39, 67	3	33, 53, 64
E. Punctuation	13	5, 18, 19, 24, 25, 26, 36, 44, 45, 52, 72, 81, 84	15	1, 7, 16, 22, 40, 42, 43, 45, 51, 55, 66, 69, 73, 79, 84
F. Capitalization	4	4, 29, 35, 47	6	4, 7, 17, 51, 54, 65
G. Sentence structure	7	30, 45, 46, 53, 57, 63, 76	10	11, 15, 19, 20, 48, 49, 57, 58, 63, 69
H. Word and sentence order	3	6, 14, 82	6	27, 31, 60, 62, 76, 80
I. Paragraphing	2	8, 80	1	59
J. Conventions in letter writing	3	1, 2, 3	3	2, 17, 18

WHAT MANAGEMENT SKILLS WILL I NEED?

This model for high school equivalency requires adroit management skills. The ordinary teacher is accustomed to conducting a one-dimensional class where she selects the thing to be learned and arranges a group experience to facilitate its learning. In this model we have added two additional dimensions: (1) individualized curriculum and, (2) limited time. This three-dimensional model can be efficiently handled by:

A. Instructional planning proportioning the time of students based on the maximum number of hours of instruction possible.

B. Instructional planning based on diagnosis of skill needs of the student.

C. Environmental planning that allows for a multiplicity of activity.

D. Graphic record keeping that holds together the separate parts.

The instructional specialist will have to plan the instructional activities so that the client gets a proportional number of hours of content and process in the five areas of instruction, if and as needed. At the same time, the instructor will be responsible for adjusting the proportion of hours spent on each content area and process as a result of interpretation of diagnostic and prognostic scores.

MANAGEMENT PROBLEM VI

The instructional specialist has decided to construct a multipurpose record keeping form that will be pasted to the outside of the student's folder and will be kept up to date by the student. This form has 150 boxes that represent the 150 hours available for instruction and testing. The graph is divided into two sections, one holding 100 boxes or hours of instruction and the other holding 50 (page 49).

Each time the student has an hour of instruction in any of the five categories marked, he will darken a block to indicate an hour completed. You will notice that the first 100-hour block is premarked proportionally as to reading, math, grammar, and specific content but the second 50-hour block is not.

A. *Why are there so many hours of reading skills allotted and so few in the field of literature, social studies and science?*

B. *In the placement test, a student got a grade level score of 10.5 in the mechanics of English and a 6.0 score in the area of math. Would you let the base core time allotments stand as above or would you change them? If so, how would you change them?*

C. *Ms. Davis has completed the first cycle as written. She has taken the ITED X-4 and received qualifying scores in social studies, literature, and language usage. How would you divide the remaining 50 hours?*

D. *Ms. Smith has taken the ITED X-4 and has qualified in all the subtests except math. In close diagnosis it becomes evident that she is deficient only in the geometric component of the curriculum. You and she together decide that this requires at most 20 more hours of instruction. How would you arrange her remaining 50-hour block?*

FEEDBACK

A. In the beginning of our discussion we spoke of the process/content mix of the GEDT. We saw that reading skills covered most of the process to be taught and that science, literature, and social studies could be handled concurrently with minimal specific treatment of the content.

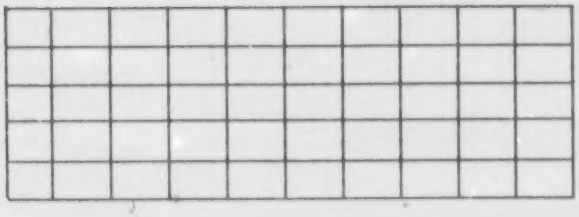
B. Clearly the student can do without instruction in English mechanics and the time allotted to English in the base core can be allotted to mathematical skills.

C. Ms. Davis should now concentrate on the math and science sections of the curriculum.

D. The probable answer to that is "give her the 20 hours and then arrange for an appointment for the GEDT and fill the empty slot from the waiting list". Actually you should rearrange the GEDT appointment when you realize the student needs only about 20 more hours of instruction.

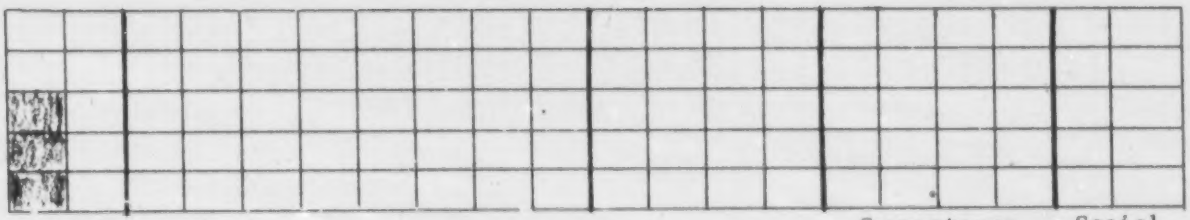
STUDENT'S RECORD FORM

50 HOURS



BEST COPY AVAILABLE

100 HOURS
BASE CORE



Testing Orientation

Reading Skills

Math Skills

Correctness of Expression

Social Studies
Literature
Science

HOW DO I INDIVIDUALIZE THE CURRICULUM?

The instructional specialist will have a curriculum list that is matched with instructional activities that can be participated in by a small group or an individual. Some of these items may be considered to be better conducted in a small group rather than individually and should be so marked. Others could be done in a group or not. Still others may be better if done alone. The instructional specialist can then form ad hoc groups for the items of curriculum that are better taught in a group and schedule students devicient in these items into these groups. The remainder of the class can work independently on an item from the prescription sheet.

MANAGEMENT PROBLEM VII

For the sake of discussion, let us assume that the instructional specialist was using the 150 block form to control the number of hours that students spent in any one subject area. On a Friday evening she looks at all the block forms and sees that 12 students are in need of mathematical instruction. They have only a few hours of time consumed working on their math prescription. She isolates these folders and examines their prescription sheets. She sees that all these students need the unit on algebra that should take 8 hours of instruction. All 12 students have the prerequisite to the unit.

A. *Would you expect the instructional specialist to:*

1. *Group the 12 students for 8 hours and give them personal instruction?*

2. *Teach the entire class the unit on algebra?*

3. *Give the 12 students programmed instruction for the unit?*

B. *Would you expect the teacher to schedule the entire class period for the group instruction?*

FEEDBACK

A. 1. If the material is best handled by a group, or handled at least as well, it is nice to have the interaction of a group and it seems a good scheduling choice.

2. This is the most inefficient method imaginable. The 12 students will gain something but the remaining 8 are going to be wasting their time.

3. This is a possible choice if the instructional specialist sees this as the best way to deal with the curriculum item.

B. NO! Those remaining 8 students will need some personal attention and feedback from the instructor. Plan to leave time for contact. While the specialist is working with the other 8, the grouped 12 can be doing self-directed work aimed at the unit in question or elsewhere on the prescription.

MANAGEMENT PROBLEM VIII

The instructional specialist has gone through the process of selecting an ad hoc group in reading comprehension. When the individual prescriptions are inspected, she finds that some students need fact finding, others inference.

Which of the following would you expect her to do?

A. *Give each student a separate story to work on with questions aimed at the individual deficient skill.*

B. *Group the students and do a directed reading lesson with the same group of comprehension questions for each student.*

C. *Group the students and do a directed reading lesson with a different group of questions for each student reflecting his individual area of deficiency.*

FEEDBACK

A. This is a good method but it lacks an element of interaction that a group can give. Students working in a group get a chance to dialogue - get feedback and group support. This model is so intensive that group interludes of interaction are highly recommended for the instructional specialist and the student.

B. This is perhaps the only wrong answer in the group.

C. This is a real possibility. It provides the individualization of the curriculum as to skills yet provides the interaction that is vital to human functioning.

WHEN I AM HIRING A TEACHER FOR THIS POSITION, WHAT SHOULD I LOOK FOR?

In most communities, continuing education is a part-time enterprise having inherent staffing problems. Your teachers are often tired after a full day of teaching. They have demands placed upon them at home, job, and community that limit their time, strength, and devotion to the part-time teaching position.

Their days are spent with children or adolescents in an instructional setting based on assumptions (London, 1972) different from and often in opposition to the assumptions on which continuing education is based (Knowles, 1970). Exposure to professional training in the general foundations of adult education has been limited. This gives our teachers little choice but to transfer the approaches of general education to adult education. Their external behavior in the classroom is linked to their daytime experiences resulting in a posture that adults are merely big children and should be taught as such.

Experience indicates that the typical candidate for high school equivalency instructor is a full-time subject matter teacher at the local secondary school, who is deeply committed to his discipline. If he has participated in preservice or inservice training since 1960, he will be concerned for the method of inquiry (Schwab, 1964) in his discipline. (Bruner, 1962) You will be expecting him to adopt a new set of assumptions that are fundamental to adult education. He should also have knowledge and understandings specific to high school equivalency.

You will want the instructor to adopt a position that reading is a legitimate approach to meaning in the natural and social sciences and literature. You will want him to see himself as a trainer rather than an educator; a manager of instructional sequences rather than the main actor in a process of inquiry.

Concomitant with these attitudinal changes, you expect the instructor to acquire a practitioner's knowledge in the field of reading, math, and English expression as well as managerial skills. In short, you are looking for a superior teacher with a feel for business management.

MANAGEMENT PROBLEM IX

Your search for an instructor has produced three candidates whose resumes have been abstracted. See chart on page 54. Examine the data and answer the following questions:

A. *Are any of these candidates totally inadequate for the position?*

B. *Are there any candidates who will not need training?*

C. *Are there any who excel in reading?*

D. *On balance, in any of the criteria showing, does any candidate outrank the others?*

E. *Which of the candidates would you choose; on what did you base your choice?*

FEEDBACK

A. No. All three candidates seem to be literate professionals. Ms. Day is a professional teacher with a normal background and good skills. She is not to be dismissed. Ms. Adrezin has a more interesting background than Ms. Day and has had some experience in adult education and surely, with good teaching skills, should seriously be considered. Her light schedule is in her favor. Mr. Johns is an interesting dark horse. His educational background is broad and his management experience is a good plus factor. He has an advantage that he has vague prior assumptions and therefore will not be subject to cognitive dissonance when faced with the adult learner. The motivation for wanting the job might indicate a positive factor but it could be an indicator of instability. The interviewer could probably determine this. Without a doubt, teacher training is a necessity for this candidate.

B. No. Ms. Day and Ms. Adrezin will need fundamental adult education, reading training, management training. Mr. Johns will need training in instruction, reading, and minor management.

C. No. Having taken a speed reading course does not indicate that you know how to teach high school equivalency reading. Having been an English major in undergraduate school is not qualifying either.

D. This is truly a matter of opinion. It does not appear that by the criterion shown any one candidate excels.

E. This also is a matter of opinion. One might take the position that Mr. Johns is potentially the strongest candidate. He has little to unlearn and seems willing and open to new experiences. His teaching skills can be remediated while his management skills are developed.

Credentials and Qualifications	Candididates for Teaching Position		
	Ms. Laura Day	Ms. Judy Adrezin	Mr. Robert Johns
B.A.	Education, State University	Pre-Engineering RPI	Major Subjects: arts, science, philosophy, English
M.A.	Education curriculum instructor	Education St. Rose	Education curriculum instruction - Hunter
Subject certification	Math	Science	English
Daytime occupation	Teaches junior high school	Teaches senior high in Albany	Daytime manager of Avis Rent-a-Car
Daytime class load	5 periods	3 periods	-
Professional exposure to adult education	None	Taught ceramics one year at Guilderland H.S.	None
Prior managerial experience	Worked as floor lady in factory summers	None	See above
Knowledge of reading	None	Took speed reading course	None but interview expressed an interest
Knowledge of math	Excellent	Excellent	Good
Knowledge of correctness of expression	Fair	Excellent	Excellent
Reason for wanting to work in adult education	Second income	Likes teaching adults and needs some extra cash	Wants to get into teaching. Looking in challenging teaching assignment
Micro teaching experience	Good job	Good job	Stiff and frightened

SUMMARY SHEET

DEVELOPED FROM CANDIDATES' RESUMES

WHEN I WANT TO EVALUATE WHAT IS GOING ON IN THE HSE CLASSROOM, WHAT SHOULD I LOOK FOR?

Those responsible for supervision hold a duality of purpose. On one hand they aid, train and support their staff. This might be called formative evaluation. On the other hand, using some criterion of judgment, they must evaluate the performance of the instructor and the program operation. This might be called summative evaluation.

There would appear to be at least two occasions for formative evaluation:

A. Informal visits of short duration.

B. Conferences at the request of either the instructor or the director.

Summative evaluation would normally be occasioned by formal observation and statistical results in terms of number of students passing the GEDT.

MANAGEMENT PROBLEM X

You and your instructor have designed the following observation form (page 57) to be used as a tool for both informal visits and formal observations. You have agreed that a selected section will be observed in a progressive fashion for formative evaluation and that eventually the entire instrument will be used in a summative evaluation that will be official and binding. You will visit the class at frequent intervals using the criterion mentioned and hold conferences with the instructor as a guide to improvement of the skill. After the training is complete in that area, another area will be chosen for formative evaluation. When the total formative evaluation is complete and sufficient time has elapsed for habituation, you will use the entire instrument as a summative evaluation.

A. *If your summative evaluation reveals regression to lower levels than the prior formative evaluation, what could be the problem?*

B. *If your evaluation indicates a superior instructor but the number of students passing the GEDT is minimal, what do you do?*

C. *Is it possible that a total formative evaluation is not given before a summative evaluation? Under what circumstances?*

FEEDBACK

A. 1. The total task is too much for the teacher. This would become evident with interviewing.

2. The teacher has decided not to adhere to the guidelines.

3. The teacher is not making an honest effort.

Possible reasons for such regression are too numerous to detail here.

B. All the components should be examined in isolation first, then the program concept in total. Don't throw out the concept for some lack in one component.

C. Yes. If in the process of formative evaluation it becomes evident that the instructor simply cannot grasp the elements that are essential to the program, the instrument can be used, with fair warning, as a summative evaluation and as a basis for reassigning the instructor.

OBSERVATION FORM		
	Circle One:	Comments - Suggestions
A. Curriculum		
1. Content	1 2 3 4	
2. Process	1 2 3 4	
3. Structure	1 2 3 4	
B. Materials		
1. Commercial	1 2 3 4	
2. Teachermade	1 2 3 4	
3. Method of selection	1 2 3 4	
C. Testing		
1. Locator	1 2 3 4	
2. Diagnostic	1 2 3 4	
3. Prognostic	1 2 3 4	
4. Record Keeping	1 2 3 4	
D. Prescription		
1. Student Mastery Record	1 2 3 4	
E. Instructional Planning		
1. Control of content mix	1 2 3 4	
2. Ad hoc grouping*	1 2 3 4	
3. Peer teaching	1 2 3 4	
4. One person working alone	1 2 3 4	
5. Work station	1 2 3 4	
*A group formed to work on a specific task that is disbanded as soon as the task is completed.		Key - 1. Needs improvement 2. Fair 3. Good 4. Excellent

Bibliography - Chapter IV

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Chapter V

TEST WISENESS

In introducing any discussion of test wiseness, it should be stated at the outset that alas, there is no magic formula. If a student has simply not acquired the necessary proficiencies for a test, there is no way of "beating the test" --short of outright cheating. But there are test-taking strategies that can enhance test performance. These strategies, increasingly recognized in the literature as "test wiseness" or "test sophistication," are a set of behaviors or skills which enable the student to attain a higher score than he would have if he were not test wise.

There is not yet a great deal of documented evidence of test wiseness and most of the empirical studies have been conducted with school-age children rather than adults. Both Erickson[1] (1972) and Millman[2] et al. (1965) provide helpful reviews of the research, including studies in which elementary as well as high school students raised their test scores after having been coached in test wiseness principles. Millman supplies a comprehensive taxonomy of these skills, which include: educated guessing, efficient use of time, and use of cues supplied by poorly-written questions.

Test wiseness is most conspicuous by its absence. Adults in a high school equivalency program are usually not very test wise. Common sense tells us that a person whose experience with standardized tests has not been extensive, successful or recent will need practice simply in the mechanics of using a separate answer sheet. We all recognize that poor eyesight, common among adults, makes it difficult to keep one's place on an answer sheet tightly packed with very small answer spaces.

Answer sheet management is probably the most obvious of the constraints under which a "test naive" adult must operate. Following are some other test wiseness skills, all proceeding from what experience suggests. Suggestions are included as to how these skills might be presented and inculcated, either in an in-service session for teachers, who would then convey them to students, or directly to the students as part of an instructional unit.

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[1] Erickson, M.E. "Test Sophistication: An Important Consideration." *Journal of Reading*, v. 16, November 1972.

[2] Millman, J., Bishop, C.H. and R. Ebel. "An Analysis of Test Wiseness." *Educational and Psychological Measurement*, v. 25, 1965.

It should be noted that, in contrast to children, adults are generally reluctant to guess on tests--for fear of being wrong. Karlsen* (1970) presents some interesting observations of this phenomenon in the course of a study with undereducated adults. In Karlsen's study, item analysis revealed that as test questions became more difficult, the tendency of those in the low-achieving group (bottom 27% on total test score) was to omit the difficult items. The very most difficult questions were not attempted by about 50% of the low-scoring group whereas this tendency was almost non-existent among the high-scorers, who had attempted all items even though not all their answers were correct.

The moral is that since the GED standard scores are computed on the basis of raw scores (number of correct answers) and since a correction-for-guessing formula is not applied, adult students should be urged to attempt every question.

The concept of educated guessing bolsters adults' self-confidence, and the notion of "the odds" being in their favor is also comprehensible and encouraging to them. Favorable odds mean that if a person runs out of time (unlikely on the GEDT) or for some other reason has to make blind guesses on five of the five-option questions, the odds are that he will get one of the five questions correct by chance alone. If, however, he makes an educated guess on a particular question, eliminating two of the five options as clearly incorrect, the odds in his favor are now one-in-three instead of one-in-five. If he makes twelve such educated guesses, he stands to gain four raw score points by chance alone. And particularly on a difficult test, four raw score points can make an important difference in the standard score.

Other pertinent points concerning guessing behavior are that all questions are equally weighted, a difficult question and an easy one both being equal to one raw score point, so that undue lingering over difficult questions is not recommended until the student has attempted all questions. Also, students should be reminded that in contrast to most other standardized tests and practice tests in instructional materials, the questions on the GEDT are not arranged in ascending order of difficulty. Therefore, students should be warned not to panic or despair if confronted at the outset by several very difficult questions.

Attitude goes hand-in-hand with test wiseness, if it is not an actual component of it. Clearly, the most sophisticated test-taking strategies will be of no avail if the examinee is disheartened or nervous to the point of panicking. A certain amount of apprehension is to be expected, indeed, some nervousness is desirable because no one can do his best if he is entirely relaxed. What needs to be allayed, however, is the sort of hope-

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*Karlsen, Bjorn. "Educational Achievement Testing with Adults: Some Research Findings." *Adult Basic Education: The State of the Art.* Chicago: Department of Education, University of Chicago, 1970.

less and helpless fear that is counter-productive, quite simply paralyzing.

One way of allaying this sort of fear is by encouraging the student to bring it out in the open preferably in a group setting with opportunities for ventilating, feedback, and group support. A variety of arrangements is possible; it is up to the administrator and his staff to decide on an appropriate method. If, for instance, an informal "rap" session is chosen, it is very likely that students and instructors will swap suggestions on how to "psyche up" for a test. Deep breathing, a good night's sleep will probably be among the varied suggestions from which each student can pick and choose those most appropriate for himself. Informal group sessions like these would also provide good opportunities for introducing relatively technical information about the test and some test wiseness strategies.

Familiarity with the multiple-choice item type is another source of test sophistication. When viewed from the inside out, with a passing knowledge of how it is constructed, a test question no longer appears as a forbidding puzzle whose solution depends less on skill than on blind luck. It is comparatively easy to introduce adult students to the design of test questions and their different categories. The resulting knowledge is especially useful in coping with reading comprehension questions-- and reading comprehension is, after all, three-fifths of the GEDT. The question or problem is posed in what is known as the stem, followed by four or five answer choices, only one of which is correct. The other choices are called "distracters" since they are red herrings designed to "distract" the person taking the test from the one correct response. Identification of the correct answer choice is facilitated by analyzing the question or problem posed in the stem. For example, does the stem contain a key phrase or date, such as "what happened in 1066?" If so, the student will employ his reading skills in scanning the passage for the key date and other necessary information.

Inference type questions, on the other hand, require the student to make an inference or to "read between the lines". In this case he should skim the passage in order to gain a general impression without wasting time trying to locate the correct answer verbatim in the stem.

In view of the importance of reading comprehension, the student should be offered some explanation of the main categories of reading comprehension questions. Familiarity with the main categories can increase the student's efficiency in taking the GEDT. The major categories, with brief descriptions, are:

L Literal - answer can be found directly in the passage

A Inference - the student must "read between the lines"

B Evaluation - the student must base his judgment only on the evidence in the passage

E Word-in-context - the word high, as used in line 3, means....

L Best title - the student combines inference add evaluation sometimes asked in terms of "main idea" or "main purpose"

The labels are not important, but a sense of what they represent is. It stands to reason that if a student is familiar with recurrent patterns which he can identify and articulate to his own satisfaction, he will be that much more confident in confronting the unfamiliar. If he can recognize familiar elements ("Oh this must be one of those read-between-the-lines things"), he is more secure and can proceed from what he already knows.

In helping students develop an awareness of recurrent categories and the strategies appropriate to each, it is desirable to begin with easy materials that have an intrinsic interest. Polemical editorials from the local newspaper might be used to generate practice reading comprehension questions, followed by attempts to categorize them.

The preceding suggestions can serve as an introduction, a foundation on which a high school equivalency preparation program can build if further coaching for test wiseness is deemed important. The previously mentioned taxonomy by Millman et al. provides examples and discussion of many of the more complex strategies, such as attention to specific determiners in the stem (except, never, always, etc.). It is likely that both staff and students will start to compile their own taxonomies as test wiseness activities continue. The whole subject of test wiseness seems to have an inherent fascination related, perhaps, to its attributes of gamesmanship. Such gamesmanship, which is within the bounds of honesty and professionalism, promotes the feeling that the GEDT is not an insuperable obstacle but an opportunity for the student to demonstrate his proficiency and ingenuity.